AppleWorks Forum

A Publication of **NAUG: *The National AppleWorks Users Group***

Volume VIII, No. 9 **Five Dollars**

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Support for AppleWorks and ///EZ Pieces Users

How to Use a Template

Dear Cathleen,

This comes under the heading of "forgotten hints for AppleWorks users".

A friend of mine wanted to use a template to try different retirement scenarios. He would start by copying the blank template into a new file. All the values and formulas moved but the column widths were incorrect. He dreaded having to set cell formats, column widths, and the like every time he set up a new template.

I reminded him that he could change the name of the file on the desktop and could then save both the old and new files on the disk. AppleWorks does not destroy the original file on the disk when you rename the copy on your desktop.

Just save your original file, press Apple-N and change the name of the file. Then make any changes you want to the file and press Apple-S to save the new file.

You will now have the original template and the revised document stored on disk.

Prof. Bernard V. Katz
Ramat Aviv, Israel

[Ed: Your friend should also use a disk utility program like TimeOut FileMaster to lock his templates. That will keep him from accidentally overwriting the original if he forgets to change the filename.]

AppleWorks Forum

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Tips for Using HP Color Deskjets

Dear **NAUG**:

Here are some tips to help my fellow **NAUG** members use an HP Deskjet 500c or 550c color printer with an Apple IIGS.

Printing on a color Deskjet with AppleWorks Classic is easy. If you use AppleWorks 3.0, you can either (a) install the Deskjet driver that comes with SuperPatch or (b) define the Deskjet as a custom printer and enter the codes that appeared in the August 1990 issue of the ***AppleWorks Forum***. If you use AppleWorks 4.0, you can install the Deskjet driver that comes with the program.

AppleWorks GS users need the new Deskjet 500c or 550c printer drivers from Vitesse to print from any 16-bit application on the color Deskjets. The Deskjet driver is part of Vitesse's Harmonie and Harmonie HP packages. Note the following about using the Vitesse drivers:

1. You must configure the printer and computer for 9600 baud communications. Although both are capable of higher speeds, you will experience problems if you try to transmit faster than 9600 baud.
2. Sixteen-bit applications cannot use the fonts built into the printer. If you own Pointless, you can use bitmapped or TrueType fonts with the Vitesse driver. If you do not own Pointless, you can use any of the standard fonts that work with AppleWorks GS.
3. A problem with AppleWorks GS can cause unacceptable printouts of your graphics. The problem occurs when you try to print AppleWorks GS 640 mode color output at 300 dpi. According to Vitesse, Quickdraw moves the image a few pixels from its original location, and the resulting graphic does not draw correctly. The work-around is to try moving the graphic one pixel to the left or right if you get unacceptable output.

Ira Garvin
Oakdale, New York

Using AE's AW3 Expander

Dear **NAUG**,

I'm having a problem using Applied Engineering's AW3 Expander v.1.1 with AppleWorks. Everything works fine until I try to save using option #3 on the AppleWorks Main Menu. AppleWorks saves my data, blanks the screen for a second, displays "pu`fn", and locks up my system.

I use AppleWorks 3.0, AE's ClockWorks v.3.2, and UltraMacros 3.1 on an Apple IIc equipped with a 1-megabyte Applied Z-Ram Ultra II board.

Robert C. St. John, Jr.
Valrico, Florida

[Doug Gum replies: Although I cannot reproduce the problem you described in your letter, I have some suggestions:

1. *Version 1.3 of the AW3 Expander is current; you can order the update from Applied.*
2. *Applied's ClockWorks enhancement is built into the AW3 Expander; do not use ClockWorks if you use the Expander.*
3. *Make certain that you patch your copy of AppleWorks with Mark Munz and Randy Brandt's Patcher v.1.6.1. This program fixes known bugs in AppleWorks 3.0. You can use the Patcher before or after you install just about any other popular enhancement product except Companion Plus or SuperPatch. [Ed: The AppleWorks 3.0 Patch Disk costs $4 (5.25-inch disk) or $6 (3.5-inch disk) plus $2 s/h from the **NAUG** Public Domain Library. You can also download the Patcher from the **NAUG** bulletin board or from the **NAUG** areas on CompuServe, America Online, and GEnie.]*

Why do you want to install the AW3 Expander if you use UltraMacros? Most of the AW3 Expander's features (such as increasing the maximum number of data base records and number of lines in word processor documents) do not work if you use UltraMacros. In addition, the Expander's print buffer conflicts with UltraMacros and the Expander's on-screen time display is provided by UltraMacros.

That leaves multiple-disk file saving, which is useful if you only have a 5.25-inch disk drive. However, a 3.5-inch drive will accommodate any file you can fit on your 1-megabyte Apple IIc.

My advice is to use a 3.5-inch drive, ClockWorks, and UltraMacros and not use the AW3 Expander.]

Can You Drop the Screens?

Dear **NAUG**,

I want to use InWords and my scanner to capture the macros published in the ***AppleWorks Forum***. But the grey screens you print behind the macros make InWords less reliable. Any chance you can eliminate those screens from your future issues?

A. Letchford
Plymouth, England

*[Ed: Thanks for the suggestion. We will no longer screen the macros published in the **AppleWorks Forum**.]*

Epson LQ-570 Printer Codes

Dear **NAUG**,

I just replaced my old reliable Epson MX-100 with a new Epson LQ-570+ printer. The printer comes with comprehensive documentation that makes it easy to use most of its built-in fonts and font styles with AppleWorks.

Epson now offers an 800 number for technical support. I had a problem producing Shadow and Outline style fonts and called the number. The first representative was not familiar with AppleWorks, so he had someone who knew AppleWorks call me back the next morning.

Enclosed are the printer codes and suggestions for **NAUG** members who want to use this excellent printer.

Marvin Yavitz
St. Louis, Missouri

*[Ed: **NAUG** members who want a copy of Mr. Yavitz's Epson LQ-570+ printer code notes should send a self-addressed, stamped business-size envelope to "Epson Printer Code Notes" at the **NAUG** office.]*

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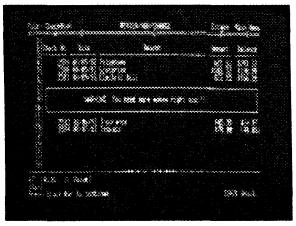
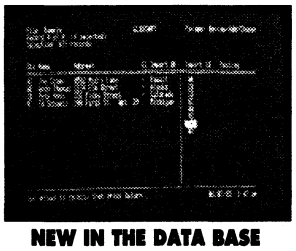


NEW IN THE SPREADSHEET

Create and edit your own pop-up Alert Dialog Boxes in your spreadsheets. Give yourself valuable warnings about errors in formulas or if your checkbook is out of balance.

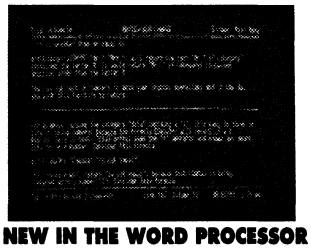
NEW ON THE DESKTOP

The new Disk Activities, File Activities, and clipboard editing menu options give you more control over AppleWorks than ever before.



NEW IN THE DATA BASE

Build a Pop-Up Glossary in the Data Base of commonly used data, like state abbreviations, area codes, salutations, closings, and more.



NEW IN THE WORD PROCESSOR

AppleWorks 4.0 gives you a split-screen function in the Word Processor, allowing you to view one part of your document and work on another. It's great for keeping your writing consistent!

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- Data masking feature makes data entry foolproof
- Word Processor window
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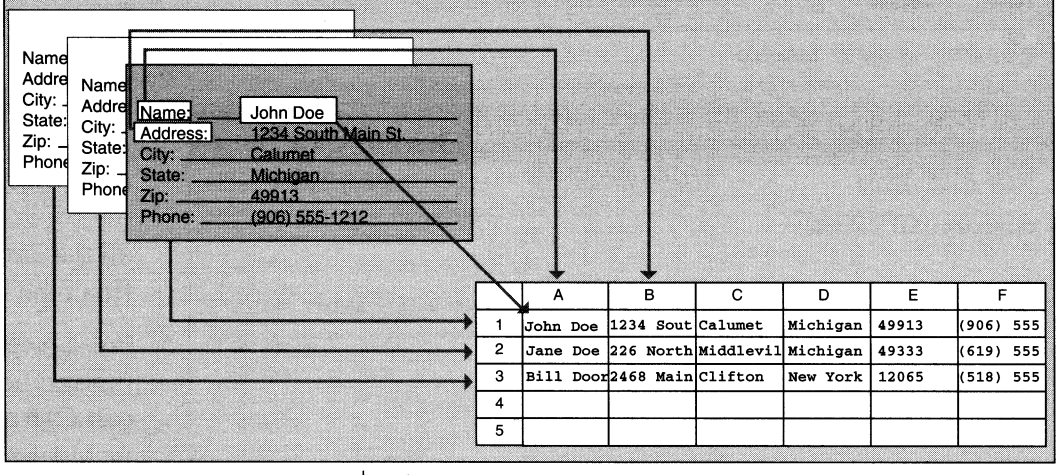
How to Use Spreadsheets to Merge Data Bases

by Roy F. Barrows and Cynthia Field

With so much talk about the features of AppleWorks 4.0, TimeOut, and UltraMacros, we sometimes forget how much power is built into AppleWorks. This article describes how to use the flexibility of an unenhanced copy of AppleWorks 3.0 to simulate a relational data base. The author assumes that you know the basics of AppleWorks.

AppleWorks' data base module cannot merge information from different data base files into a single report. Data base programs that can perform this function are called "relational" because they let you define relationships between data stored in separate files. Among the more common uses of a relational data base is linking a customer address list to an accounts receivable file to send monthly statements.

Figure 1: Relationship between Data Base and Spreadsheet



By contrast, a teacher who wants to use AppleWorks to generate a report showing the relationship between attendance and grades can only create the report if he or she tracks attendance and grades in the same data base file. Although AppleWorks enhancements such as TimeOut ReportWriter and Total Control add powerful relational tools to AppleWorks, this article describes how to make the AppleWorks 3.0 data base pseudo-relational without buying any software add-ons.

How It Works

The technique uses the clipboard and the AppleWorks spreadsheet module to merge information from two or more data base files. After merging the data, you can use the spreadsheet's calculating power to perform your analyses. Then you transfer the merged data from the spreadsheet into a data base file from which you generate your reports.

These procedures work because AppleWorks 3.0's data base categories and spreadsheet columns are analogous. To AppleWorks, each data base category is like a spreadsheet column; each record is like a row (see *Figure 1*). For example, if you copy the contents of a data base with two categories named NAME and ADDRESS into a spreadsheet, the list of names will appear in the first column of the spreadsheet; the addresses will appear in the second column.

Merging Two Data Bases

The following tutorial shows you how to combine the two data bases in *Figures 2* and *3*. The

Figure 2: The GRADEBOOK Data Base

File: GRADEBOOK REVIEW/ADD/CHANGE Escape: Main Menu

Selection: All records

FNAME	LNAME	GRADE PERIOD 1	GRADE PERIOD 2	GRADE PERIOD 3	GRADE PERIOD 4
Peter	Ashton	77	76	-	-
Tim	Benson	84	79	-	-
John	Doe	92	89	-	-
Scott	Honan	78	82	-	-
Todd	Jones	77	65	-	-
Sam	Kern	87	91	-	-
Jean	Larson	96	89	-	-
Mary	Lee	84	88	-	-
Lori	Parsons	86	83	-	-
Carla	Pecco	76	81	-	-
Flora	Peters	79	83	-	-
Robert	Sands	68	56	-	-
Mary	Smith	91	87	-	-
Ella	Turner	77	82	-	-
James	Walker	75	68	-	-

Type entry or use ⌘ commands 32K Avail.

Figure 3: The ATTENDANCE Data Base

File: ATTENDANCE REVIEW/ADD/CHANGE Escape: Main Menu

Selection: All records

FNAME	LNAME	DAYS ABSENT PERIOD 1	DAYS ABSENT PERIOD 2	DAYS ABSENT PERIOD 3
Peter	Ashton	4	5	-
Tim	Benson	2	3	-
John	Doe	0	2	-
Scott	Honan	4	2	-
Todd	Jones	4	6	-
Sam	Kern	1	0	-
Jean	Larson	0	1	-
Mary	Lee	1	0	-
Lori	Parsons	2	4	-
Carla	Pecco	5	3	-
Flora	Peters	4	2	-
Robert	Sands	7	9	-
Mary	Smith	0	1	-
Ella	Turner	3	0	-
James	Walker	4	5	-

Type entry or use ⌘ commands 32K Avail.

GRADEBOOK data base stores student grades. The ATTENDANCE data base tracks student absenteeism. *Figure 4* depicts the report you will produce that includes data from both files.

Follow these steps:

1. Create the GRADEBOOK and ATTENDANCE data bases using the data in *Figures 2* and *3*.

[Ed: Copies of these data base files appear on this month's issue of ***NAUG on Disk****, which costs $10 plus $2 s/h from* ***NAUG****.]*

2. Create two new spreadsheet files named SPREAD.EDIT and SPREAD.MERGE "from scratch". The first file is a temporary data-storage worksheet. The second will serve as the basis for the combined REGISTER data base you will create later in this exercise.
3. Display the GRADEBOOK file in multiple record layout. Alphabetize the data based on the LNAME and FNAME categories. Then copy all the records to the clipboard.
4. Switch to SPREAD.EDIT and press Apple-C to copy the information from the clipboard. Don't worry if some entries are too long to fit in the columns; AppleWorks transfers all the data but only displays the first nine characters in each entry.
5. Press Apple-C to copy the block of information from cell A1 through cell C15 to the clipboard. This includes students' first names, last names, and first period grades.
6. Switch to SPREAD.MERGE and copy the clipboard's contents.
7. In SPREAD.EDIT, copy the block of information from cell D1 through D15 to the clipboard. These are the second period grades.
8. Switch to SPREAD.MERGE, put the cursor in cell E1, and copy the information from the clipboard. That leaves columns D and F available for information about first and second period attendance, respectively. SPREAD. MERGE should now look like the example in *Figure 5*.
9. Use the Apple-B command to delete all the data from SPREAD.EDIT. That prepares the tempo-

rary worksheet to receive information from the ATTENDANCE data base.

10. Display the ATTENDANCE file in multiple record layout. Sort the data base records alphabetically on the LNAME and FNAME categories. Then copy all the records to the clipboard.

11. Copy the clipboard's contents into SPREAD.EDIT.

12. Copy the block of data from cells C1 through C15 into cells D1 through D15 in SPREAD.MERGE.

13. Return to SPREAD.EDIT and copy the block of data from cells D1 through D15 into column F in SPREAD.MERGE. Your screen should now look like the example in *Figure 6*.

Figure 4: The Combined Report

File: REGISTER Page 1
Report: FINAL REPORT October 15, 1993

FNAME	LNAME	GR. PERIOD 1	ABSENT PERIOD 1	GR. PERIOD 2	ABSENT PERIOD 2	GR. AVERAGE	TOTAL ABSENT
Peter	Ashton	77	4	76	5	76.5	9
Tim	Benson	84	2	79	3	81.5	5
John	Doe	92	0	89	2	90.5	2
Scott	Honan	78	4	82	2	80.0	6
Todd	Jones	77	4	65	6	71.0	10
Sam	Kern	87	1	91	0	89.0	1
Jean	Larson	96	0	89	1	92.5	1
Mary	Lee	84	1	88	0	86.0	1
Lori	Parsons	86	2	83	4	84.5	6
Carla	Pecco	76	5	81	3	78.5	8
Flora	Peters	79	4	83	2	81.0	6
Robert	Sands	68	7	56	9	62.0	16
Mary	Smith	91	0	87	1	89.0	1
Ella	Turner	77	3	82	0	79.5	3
James	Walker	75	4	68	5	71.5	9

Figure 5: SPREAD.MERGE with GRADEBOOK

```
File: SPREAD.MERGE              REVIEW/ADD/CHANGE              Escape: Main Menu
=========A========B========C========D========E========F========G========H====
   1|Peter    Ashton          77              76
   2|Tim      Benson          84              79
   3|John     Doe             92              89
   4|Scott    Honan           78              82
   5|Todd     Jones           77              65
   6|Sam      Kern            87              91
   7|Jean     Larson          96              89
   8|Mary     Lee             84              88
   9|Lori     Parsons         86              83
  10|Carla    Pecco           76              81
  11|Flora    Peters          79              83
  12|Robert   Sands           68              56
  13|Mary     Smith           91              87
  14|Ella     Turner          77              82
  15|James    Walker          75              68
  16|
  17|
  18|
--------------------------------------------------------------------------------
E1: (Value, Layout-FØ) 76

Type entry or use ⌘ commands                                        28K Avail.
```

Analyzing the Data

Next, you will use AppleWorks' spreadsheet functions and mathematical capabilities to calculate the average grade and total number of days absent for each student. Continue as follows:

1. In cell G1 of SPREAD.MERGE type the formula `@AVG(C1,E1)` to calculate an average of the two grades for Peter Ashton.

2. Use the Apple-L command to set the Value Format in cell G1 to "Fixed" with one decimal place.

3. In cell H1 type the formula `+D1+F1` to calculate the total number of days Peter Ashton missed class.

4. Put the cursor in cell G1 and press Apple-C to copy the formulas in G1 and H1 within the worksheet to the range of cells spanning the block G2 to H15. Press Apple-R to make all cell references "relative".

5. Press Apple-N and rename the spreadsheet SPREAD.ANALYZE. Your screen should look like the example in *Figure 7*.

6. Save your work.

Creating the Merged Data Base

Now you will copy the SPREAD.ANALYZE data into a new data base file. Continue as follows:

Figure 6: All Data Merged into SPREAD.MERGE

```
File: SPREAD.MERGE              REVIEW/ADD/CHANGE              Escape: Main Menu
=========A========B========C========D========E========F========G========H====
   1|Peter     Ashton          77         4         76         5
   2|Tim       Benson          84         2         79         3
   3|John      Doe             92         0         89         2
   4|Scott     Honan           78         4         82         2
   5|Todd      Jones           77         4         65         6
   6|Sam       Kern            87         1         91         0
   7|Jean      Larson          96         0         89         1
   8|Mary      Lee             84         1         88         0
   9|Lori      Parsons         86         2         83         4
  10|Carla     Pecco           76         5         81         3
  11|Flora     Peters          79         4         83         2
  12|Robert    Sands           68         7         56         9
  13|Mary      Smith           91         0         87         1
  14|Ella      Turner          77         3         82         0
  15|James     Walker          75         4         68         5
  16|
  17|
  18|
--------------------------------------------------------------------------------
F1: (Value, Layout-F0) 5

Type entry or use ⌘ commands                                    27K Avail.
```

Figure 7: SPREAD.ANALYZE with Calculations

```
File: SPREAD.ANALYZE            REVIEW/ADD/CHANGE              Escape: Main Menu
=========A========B========C========D========E========F========G========H====
   1|Peter     Ashton          77         4         76         5       76.5         9
   2|Tim       Benson          84         2         79         3       81.5         5
   3|John      Doe             92         0         89         2       90.5         2
   4|Scott     Honan           78         4         82         2       80.0         6
   5|Todd      Jones           77         4         65         6       71.0        10
   6|Sam       Kern            87         1         91         0       89.0         1
   7|Jean      Larson          96         0         89         1       92.5         1
   8|Mary      Lee             84         1         88         0       86.0         1
   9|Lori      Parsons         86         2         83         4       84.5         6
  10|Carla     Pecco           76         5         81         3       78.5         8
  11|Flora     Peters          79         4         83         2       81.0         6
  12|Robert    Sands           68         7         56         9       62.0        16
  13|Mary      Smith           91         0         87         1       89.0         1
  14|Ella      Turner          77         3         82         0       79.5         3
  15|James     Walker          75         4         68         5       71.5         9
  16|
  17|
  18|
--------------------------------------------------------------------------------
H1: (Value) +D1+F1

Type entry or use ⌘ commands                                    26K Avail.
```

1. Add a new data base file to the desktop. Create the file from scratch and name it REGISTER.
2. Create the following categories that correspond to each column in SPREAD.ANALYZE:

   FNAME, LNAME, GR. PERIOD 1, ABSENT PERIOD 1, GR. PERIOD 2, ABSENT PERIOD 2, GR. AVERAGE, TOTAL ABSENT.
3. Switch to SPREAD.ANALYZE and copy the block of data from cell A1 through H15 to the clipboard.
4. Copy the contents of the clipboard into the REGISTER data base.
5. Save the REGISTER file.

Now you can use AppleWorks' data base reporting capability to design and print the relational reports you need.

Limitations

Here are some of the limitations of this procedure:

1. Data bases that you plan to merge should have at least one category in common. For example, the LNAME category in both GRADEBOOK and ATTENDANCE contains an alphabetically sorted student roster. In the example, LNAME is the "key" or "index" category. Without such a "common denominator" it is difficult to synchronize the data base files accurately.
2. Both files must have the same number of records. If grade or attendance information is missing for one or more students, you can add empty spreadsheet rows to synchronize student names, grades, and attendance records. To avoid extra work, make certain that all data base records are completely filled in before copying the data to SPREAD.EDIT.
3. Although AppleWorks data base files can contain up to 76 characters in an entry, AppleWorks spreadsheets can only accommodate 70 characters in a cell. Make certain you have no more than 70 characters in any data base entry that you plan to transfer to a spreadsheet.
4. You cannot create more than 30 categories in an AppleWorks data base file. That limits the

amount of information you can merge into a combined data base.

If you need more than 30 categories, consider upgrading to AppleWorks 4.0, which accepts up to 60 categories and includes many features that make it easy to create relational data base files. *[Ed: An article in next month's issue of the **AppleWorks Forum** will describe how to create relational data bases with AppleWorks 4.0.]*

Conclusion

You now know how to merge all or selected portions of two or more AppleWorks data base files into a combined data base. The procedure uses the clipboard to transfer data base information to a temporary worksheet. From there you transfer the data block by block into a consolidated spreadsheet where you combine and analyze the data. Finally, you copy the merged data into a new data base from which you generate your pseudo-relational reports.

These procedures make it easy to combine data from different files in new data base files and add useful flexibility to AppleWorks.

[Roy Barrows is a writer and developer of macro-based enhancements for AppleWorks.]

*[Dr. Cynthia Field, the Contributing Editor of the **AppleWorks Forum**, is a free lance writer who has published more than 300 articles in computer magazines and medical journals.]*

AppleWorks News

AppleWorks 4.0 to Ship October 27

At press time, Quality Computers announced that it will start shipping AppleWorks 4.0 on October 27. The company expects to ship all back orders by October 30 and asks customers not to call about their order unless it hasn't arrived by November 15.

[Quality Computers, 20200 Nine Mile Road, St. Clair Shores, Michigan 48080; (800) 777-3642; Fax: (313) 774-2698.]

Lowest Price for a PostScript Printer

NAUG members can now buy a PostScript-compatible Digital Equipment Corporation (DEC) laser printer for $699.

The DECLaser 1152 is a 300 dpi printer rated at four pages per minute using the same Canon LX engine used in the HP Laserjet IIIP and Apple LaserWriter NTR printers.

The DECLaser 1152 automatically selects between AppleTalk, Serial, and Parallel communications and supports Level 1 and Level 2 PostScript and the PCL4 language. The unit comes with 2 megabytes of RAM (expandable to 4 megabytes), includes 17 built-in fonts, and a 70 page sheet feeder.

NAUG member prices are as follows:

	Cash Price	MC / VISA Price
No toner cartridge, 90 day warranty	$699	$719
w/ toner cartridge, 1-year warranty	739	759

These are new printers that are warrantied by the dealer. Prices do not include shipping. A review of the DECLaser 1152 appeared in the September 1993 issue of MacUser; the magazine selected the printer as one of three Bottom Line Picks and awarded the unit 3.5 mice.

An additional 2 megabytes of RAM (recommended) costs $99. A 250-sheet paper tray costs $99 (list: $174).

NAUG has not tested this printer with AppleWorks or AppleWorks GS and cannot guarantee that the printer will work with these programs. We would appreciate hearing from members who use this printer with an Apple II.

*[David Allon, Allon Computer, 28 Knight Street, Norwalk, Connecticut 06851; (800) 688-5554; Fax: (203) 854-6612. Specify that you qualify for the **NAUG** price when you order.]*

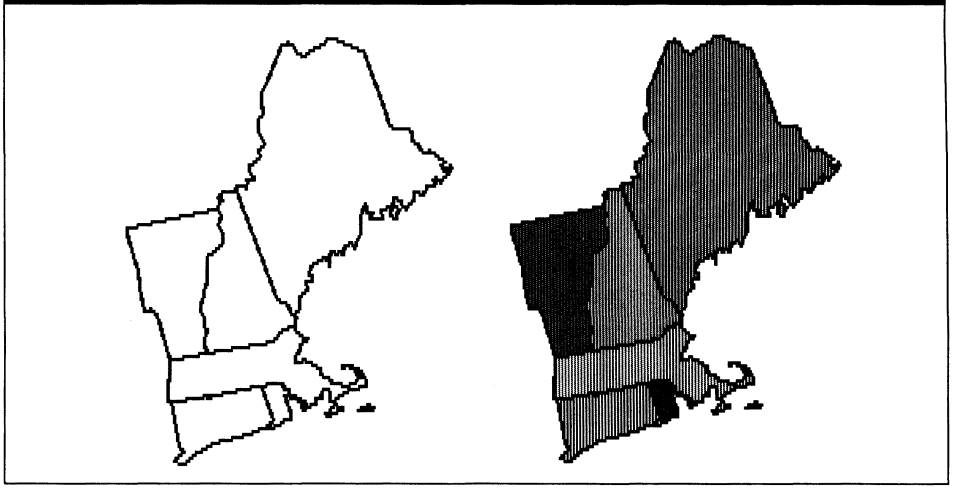
Great Maps for AppleWorks GS

by Ira M. Garvin

With changes in the world coming so often, finding up-to-date, clear maps is especially difficult. As a result, my HyperStudio stacks, student worksheets, and tests quickly become obsolete.

Bruce Jones Designs now provides a solution with "Maps! Maps! Maps!", a five-disk set of Super Hi-Res clip-art maps for AppleWorks GS, HyperCard, HyperStudio, and other programs that can use Hi-Res graphics (see *Figure 1*).

Figure 1: Samples from Maps! Maps! Maps!



Maps! Maps! Maps! includes more than 300 maps of the United States, Europe, Africa, South America, the Middle East, Asia, Central America, South America, and Australia. Each map, which comes in black and white, color, and outline formats, is crisp on the screen and in print. The maps are ideal for student worksheets, newsletters, handouts, and transparencies. The package includes a 16-page manual that shows all the maps to make it easier to choose the appropriate map for your application.

The company ships the 3.5-inch disks in a heavy plastic "pocket holder" that fits into a loose-leaf binder for easy storage.

[Bruce Jones Designs, 31 St. James Avenue, Suite 1060B, Boston, Massachusetts 02116; (800) 843-3873; Fax: (617) 350-8764.]

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[Ira M. Garvin is a Social Studies teacher at West Hempstead High School in New York State and may be reached on America OnLine as Sherlock4.]

How to Use AppleWorks 4.0's Enhanced Desktop

by Will Nelken

This is the first in a series of articles that describe how to use the new features of AppleWorks 4.0. The author assumes that you know the basics of AppleWorks. See the inserts bound into the center of this issue of the ***AppleWorks Forum*** *for a tear-off Command Card that lists all the keystroke commands described in this article.*

Anyone who reads the ***AppleWorks Forum*** has seen the lists of the dozens of new features that Randy Brandt and Dan Verkade added to AppleWorks 4.0. Unfortunately, these lists do not capture the excitement that comes with working with this new product. AppleWorks 4.0 provides dramatically enhanced power with the same user-friendliness as earlier versions of the program.

This article describes how to use the new features of AppleWorks' enhanced desktop environment, which envelopes all the AppleWorks modules.

Adding Files

AppleWorks 4.0's familiar Main Menu is identical to the menu in AppleWorks 3.0, but serves as a gateway to many of the new features added to the program.

For example, AppleWorks 4.0 now gives you four ways to add files to the desktop:

- Follow the menu path.
- Use the QuickFile feature.
- Use the QuickPath feature.
- Use a single keystroke command.

Menu Path: This is the way you always added files to the desktop, and the keystrokes remain unchanged from earlier versions of AppleWorks. Highlight "1. Add files to the Desktop" and press the Return Key twice to add a file from the current disk or path. To change the disk or path, select "2. A different disk" from the Add Files Menu, select a disk from the Change Current Disk Menu, and choose a file from the list.

Here are some hidden keystroke shortcuts that let you set the file path with the Change Current Disk Menu on the screen:

Press <oa-D> or <oa-,> to drop a subdirectory from "The current disk:". Press <oa-A> or <oa-.> to add a subdirectory level to "The current disk:". Highlight the disk and press <oa-rtn> to add a subdirectory level to any available disk. If you are uncertain which disk is in what drive, press <oa-/> or <oa-?> to display the volume name of each available disk or partition.

Alternatively, you can select "ProDOS directory" from the Change Current Disk Menu. Press <oa-rtn> when you select "ProDOS directory" to follow the subdirectory paths (also called "point-and-shoot") or press the Return Key if you want to type in the new pathname. *[Ed: AppleWorks 4.0 reverses the role of the <oa-rtn> and <rtn> keystrokes to retain consistency in the change-a-path procedure throughout the program.]*

QuickFile: If you know the name of the file you want from the current disk or path, you can use AppleWorks 4.0's QuickFile feature to bypass the file list. Choose "Add a file to the Desktop" to access the Add Files Menu and press <oa-rtn>. The "Enter filename: " prompt will appear at the bottom of the screen. Type the filename (it is not case-sensitive) and press the Return Key to access the file.

QuickPath: AppleWorks 4.0's QuickPath feature makes it easy to switch between your commonly used disks and directories.

Figure 1: Using the QuickPath List

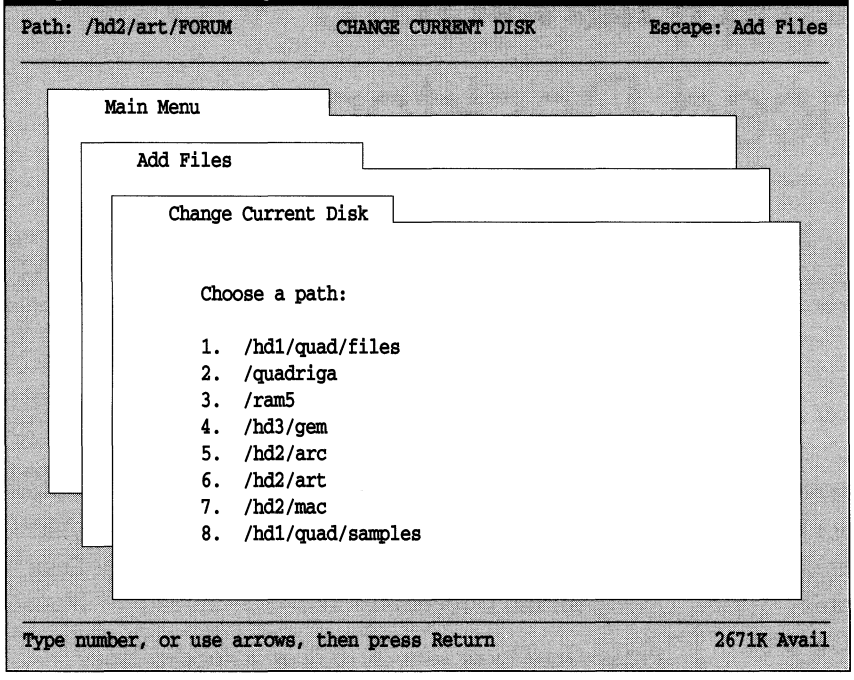
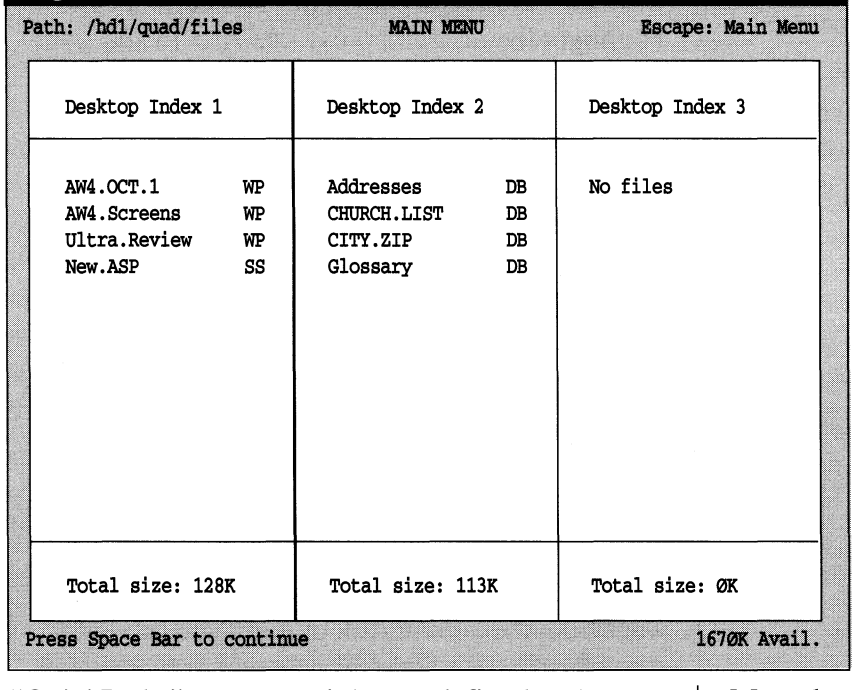


Figure 2: All Three Desktop Indexes



"QuickPaths" are up to eight pre-defined pathnames to your commonly used disks and directories. You define the pathnames by selecting the "Pathnames" option from the Standard Settings Menu to create your QuickPath list. (Pressing <oa-Q><oa-S> lets you reach this list from anywhere in AppleWorks.)

Once you define the pathnames, you can press <oa-P> at the Change Current Disk Menu to display the QuickPath list (see *Figure 1*). Highlighting the path you want and pressing the Return Key displays its file list.

<sa-A>: AppleWorks 4.0's new <sa-A> command is the easiest way to add files to the desktop. Press <sa-A> from anywhere in AppleWorks and the program displays:

```
Add Files?  Current Disk  QuickPath  Word
Processor  Data Base  Spreadsheet
```

Choose "Current Disk" and press <rtn> and AppleWorks displays the file list for the current disk or path. Press <oa-rtn> and the program displays the Change Current Disk Menu which lets you switch between disk drives on your system.

Select "QuickPath" and AppleWorks lets you choose any path you entered into the QuickPath list on your system.

The last three options instantaneously create a new word processor, data base, or spreadsheet file on the desktop. The data base option asks you to specify the number of categories (up to 60 categories) in your file.

Handling Text Files

AppleWorks 4.0 automatically lists ASCII text files on the Add Files Menu. That makes it easy to put these files on the desktop as word processor documents; AppleWorks 4.0 keeps the file's name and leaves the file status as "Unchanged". The Standard Settings Menu lets you tell AppleWorks whether to save these files as word processor documents or as text files when you are done editing the documents.

Saving Files

AppleWorks 4.0 also gives you more control over the file saving process. The standard <oa-S> and <oa-ctrl-S> keypresses still work as they did in

New AppleWorks 4.0 Keystrokes

Keypress	Location	Result
<sa-A>	anywhere	Add or create a file.
<sa-A oa-rtn>	anywhere	Add a file from another disk or path.
<sa-S>	any file	Display the Save Files Menu.
<sa-S oa-rtn>	any file	Save a file to another disk or path.
<oa-A>	any file list	Arrange the file list.
<oa-1>	any file list	Go to the top of the list.
<oa-9>	any file list	Go to the end of the list.
<oa-down>	any file list	Go to the next page of the list.
<oa-up>	any file list	Go to the previous page of the list.
<oa-rtn>	Add Files Menu	Prompt for a filename on the current disk or path.
<oa-A>	Change Current Disk	Add a subdirectory to the current disk or path.
<oa-D>	Change Current Disk	Drop a subdirectory from the current disk.
<oa-P>	Change Current Disk	Display the QuickPath list.
<oa-,>	Change Current Disk	Drop a subdirectory from the current disk or path.
<oa-.>	Change Current Disk	Add a subdirectory to the current disk or path.
<oa-rtn>	Change Current Disk	Add a subdirectory to the highlighted disk.
<oa-/>	Change Current Disk	Display all online volume names.
<oa-?>	Change Current Disk	Display all online volume names.
<rtn>	ProDOS directory	Enter a new path manually.
<oa-rtn>	ProDOS directory	Point-and-shoot to designate a new path.
<tab>	Save Files Menu	Cycle through the three desktops.
<tab>	Remove Files Menu	Cycle through the three desktops.
<oa-rtn>	File Activities Menu	Change the disk or path before acting.
<tab>	File Activities Menu	Toggle to the Disk Activities Menu.
<oa-rtn>	Disk Activities Menu	Change the disk or path before acting.
<tab>	Disk Activities Menu	Toggle to the File Activities Menu.
<oa-C>	Desktop Index	View/edit the clipboard of the current filetype.
<oa-D>	Desktop Index	Go to the Disk Activities Menu.
<oa-F>	Desktop Index	Go to the File Activities Menu.
<oa-S>	Desktop Index	Go to the Standard Settings Menu.
<oa-V>	Desktop Index	View all three desktop indexes at once.
<tab>	Desktop Index	Cycle through the three desktops.

AppleWorks 3.0, but AppleWorks 4.0 also offers file saving with a "one-touch" keystroke (a built-in macro). Press <sa-S> and AppleWorks 4.0 displays

```
Save Files?  Current Disk  QuickPath
```

Selecting "Current Disk" is just like pressing <oa-S>. Selecting "Current Disk" with <oa-rtn> takes you to the Change Current Disk Menu and lets you choose any valid disk drive on your system. Alternatively, you can choose "ProDOS directory" and enter any path you like.

The QuickPath option makes it easy to select any path you designated on your QuickPath list.

Figure 3: Editing the Three Clipboards

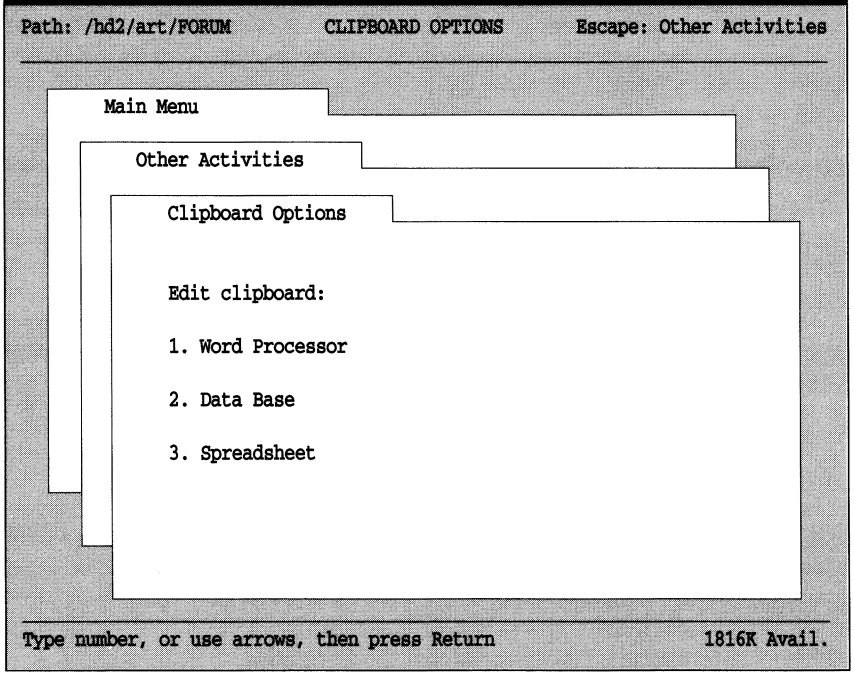
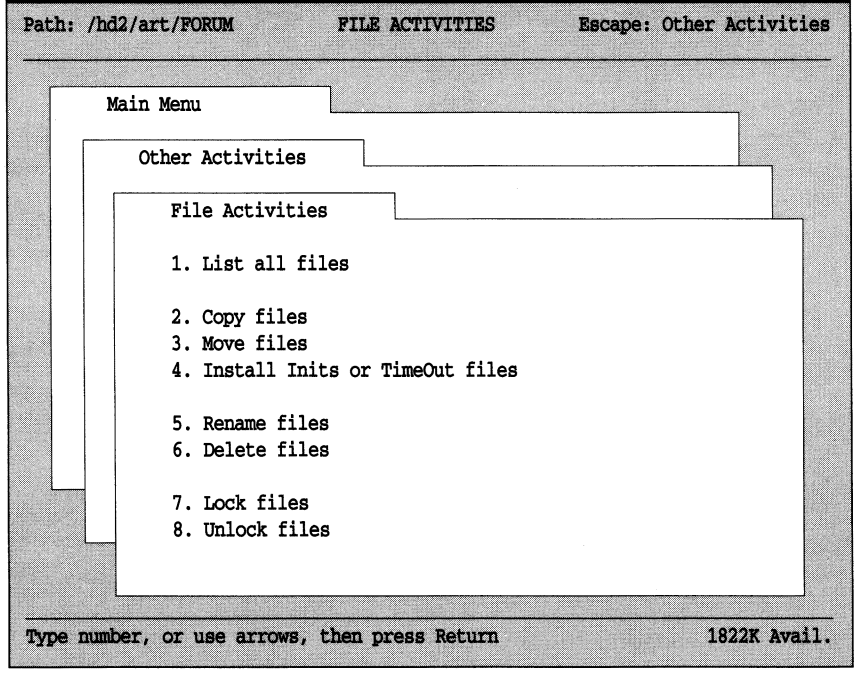


Figure 4: New File Activities Menu



Multiple Desktops

You probably know that AppleWorks 4.0 offers three desktops that can accommodate up to 36 files. Pressing <oa-Q> displays the first Desktop Index; repeated presses of the Tab Key cycle you through all three desktop indexes. Pressing <oa-Q><oa-V> displays all three desktop indexes (see *Figure 2*).

The Tab Key also switches between desktop indexes after you access the Save Files or Remove Files Menu.

Multiple Clipboards

The AppleWorks clipboard integrates the three AppleWorks modules by letting you move data between word processor, data base, and spreadsheet files.

In the past, all three modules shared a single clipboard. But AppleWorks 4.0 offers separate clipboards for each module and lets you append information to each clipboard instead of only replacing the existing clipboard information.

Version 4.0 also offers in-context editing of the contents of each clipboard. For example, open the spreadsheet clipboard and it looks and acts like a regular spreadsheet.

To view or edit the clipboards, you go to the Other Activities Menu and select "Clipboard Options". Then choose the clipboard you want to access (see *Figure 3*).

Alternatively, you can press <oa-Q> <oa-C> to view or edit the clipboard that matches the filetype of the current desktop file.

AppleWorks 4.0's editable clipboard lets you modify the information you will "paste" into the new location without changing the original document. After making your changes, press the Escape Key and the data will revert to the clipboard format.

File Maintenance

AppleWorks 4.0 offers all the file and disk maintenance features that TimeOut FileMaster added to earlier versions of AppleWorks. Select "File Activities" from the Other Activities Menu and AppleWorks displays the menu in *Figure 4*.

This feature lets you list all the files on the current disk and copy, move, rename, delete, and lock and

unlock files. Pressing <oa-rtn> on any item in this menu lets you change to another disk or path before performing the command. Pressing <oa-A> with any file list on the screen lets you display the list in alphabetical, chronological, or filetype order. <oa-1> and <oa-9> let you jump to the beginning or end of any file list. Pressing <oa-down> or <oa-up> jumps one page at a time through the list. The new File Activities Menu even lets you install new TimeOut or Init files, although you must re-launch AppleWorks to use these applications.

Pressing <oa-Q><oa-F> accesses the File Activities Menu from anywhere in AppleWorks.

Disk Maintenance

Selecting "Disk Activities" from the Other Activities Menu displays the Disk Activities Menu (see *Figure 5*), which gives you the features of a powerful disk utility program within AppleWorks.

Select "Verify a disk" and AppleWorks examines every block on the designated disk for read only or read/write errors (see *Figure 6*). This is a simple way to check if a file error message is caused by a problem with the file or by physical damage to the disk.

Pressing <oa-Q><oa-D> accesses the Disk Activities Menu from anywhere in AppleWorks. Pressing the Tab Key toggles between the Disk Activities Menu and the File Activities Menu.

Conclusion

This article describes the five powerful desktop features added to AppleWorks 4.0. These include additional file-adding and file-saving functions, multiple desktops and clipboards, and file and disk management utilities. These features make AppleWorks 4.0 more capable, more flexible, and more efficient than ever.

Next month I will show you how to build a simple data base that uses the powerful relational capabilities of AppleWorks 4.0.

[Will Nelken, who is the pastor of a church in San Rafael, California and a ***NAUG*** *Members Helping members volunteer, is a beta tester of AppleWorks 4.0, and is Associate Editor of TimeOut Central. Will is the author of* ***Ultra – to the Max!****, a comprehensive tutorial for TimeOut UltraMacros.]*

Figure 5: Disk Activities Menu

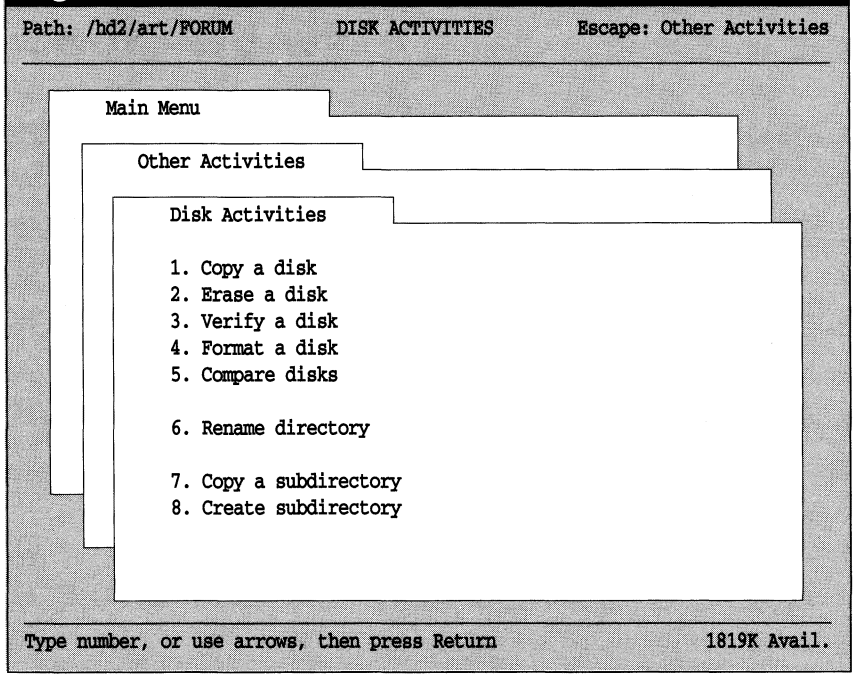
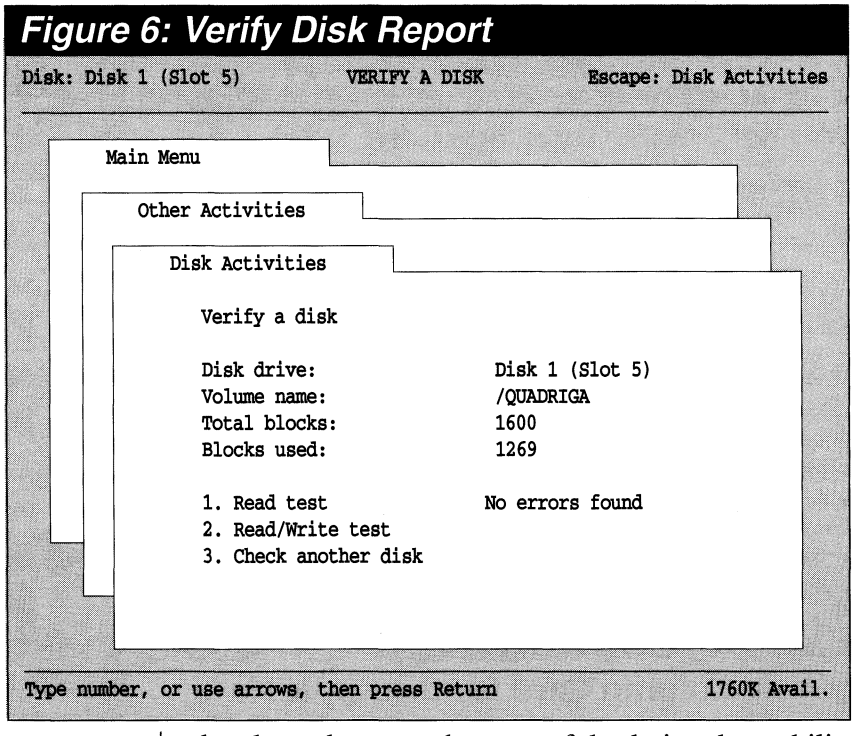


Figure 6: Verify Disk Report



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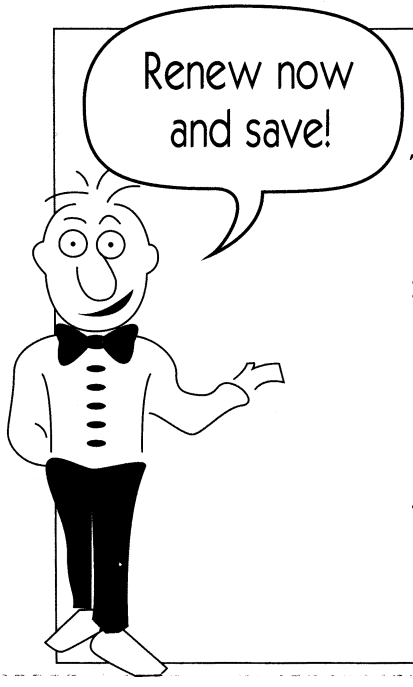
AppleWorks 4.0 Desktop Keystrokes

Keypress	Location	Result
<sa-A>	anywhere	Add or create a file.
<sa-A oa-rtn>	anywhere	Add a file from another disk or path.
<sa-S>	any file	Display the Save Files Menu.
<sa-S oa-rtn>	any file	Save a file to another disk or path.
<oa-A>	any file list	Arrange the file list.
<oa-1>	any file list	Go to the top of the list.
<oa-9>	any file list	Go to the end of the list.
<oa-down>	any file list	Go to the next page of the list.
<oa-up>	any file list	Go to the previous page of the list.
<oa-rtn>	Add Files Menu	Prompt for a filename on the current disk or path.
<oa-C>	Desktop Index	View/edit the clipboard of the current filetype.
<oa-D>	Desktop Index	Go to the Disk Activities Menu.
<oa-F>	Desktop Index	Go to the File Activities Menu.
<oa-S>	Desktop Index	Go to the Standard Settings Menu.
<oa-V>	Desktop Index	View all three desktop indexes at once.
<tab>	Desktop Index	Cycle through the three desktops.



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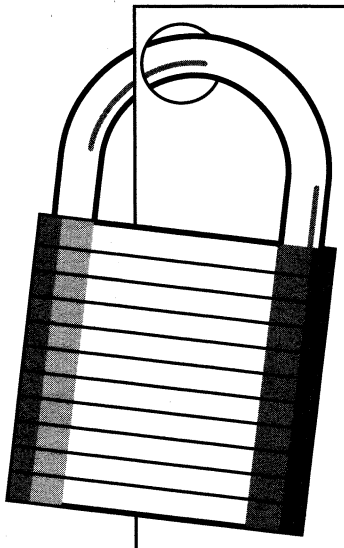

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Keypress	Location	Result
<oa-A>	Change Current Disk	Add a subdirectory to the current disk or path.
<oa-D>	Change Current Disk	Drop a subdirectory from the current disk.
<oa-P>	Change Current Disk	Display the QuickPath list.
<oa-,>	Change Current Disk	Drop a subdirectory from the current disk or path.
<oa-.>	Change Current Disk	Add a subdirectory to the current disk or path.
<oa-rtn>	Change Current Disk	Add a subdirectory to the highlighted disk.
<oa-/>	Change Current Disk	Display all online volume names.
<oa-?>	Change Current Disk	Display all online volume names.
<rtn>	ProDOS directory	Enter a new path manually.
<oa-rtn>	ProDOS directory	Point-and-shoot to designate a new path.
<tab>	Save Files Menu	Cycle through the three desktops.
<tab>	Remove Files Menu	Cycle through the three desktops.
<oa-rtn>	File Activities Menu	Change the disk or path before acting.
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A Stock Market Portfolio Register

by Stan Hecker

This month's AppleWorks 3.0 template can help you track profits and losses for as many as eight stocks in a portfolio. The author assumes that you know the basics of AppleWorks and that you created the stock tracking template in last month's issue of the ***AppleWorks Forum****.*

Some people plunge into an investment program by acquiring several stocks. But most investors start by buying stock in a single company and expand their holdings to other companies later. This month's template accommodates that type of investor.

You will start with the stock transaction template that you developed in last month's article. *[Ed: See the article entitled "A Stock Market Transaction Register" on pages 18-25 of the October 1993 issue of the* ***AppleWorks Forum****.]* Then you will expand the template to accommodate each new stock that you buy (see *Figure 1*).

You will also add a "Results for the Full Portfolio" section that will maintain summary data for your entire portfolio.

The following step-by-step directions describe how to create a register for stocks from two companies: Company AAA and Company BBB. I will assume that you purchased the stock in Company BBB 35 weeks after you bought the Company AAA stock. Later you can expand the template to accommodate additional stocks.

Preparing for the First Stock

You will start by expanding last month's template so it accommodates your Company AAA trades for a full year. Follow these steps:

1. Add the STOCK.TEMPL you developed last month to the desktop. Press Apple-N and rename the template PORTFOLIO. Then use the Apple-T command to eliminate the titles in the spreadsheet.
2. Follow steps #2 through #5 under "Expanding the Template" on page 23 in last month's article. Expand the template to accommodate a full year's transactions for Company AAA.
3. Press Apple-J to jump to the upper window.

   Cell B10 of the template is incorrectly protected to allow "Nothing". Put the cursor in cell B10, issue an Apple-L command, and change the protection to "Values only".
4. Enter "AAA" in cell B6. Then enter the data from *Figure 1* in last month's article. Remember to enter the end-of-the-year value into cell D62.
5. Press Apple-K. The values in the "RESULTS FOR STOCK" window at the bottom of your screen should match *Figure 1* in last month's article.

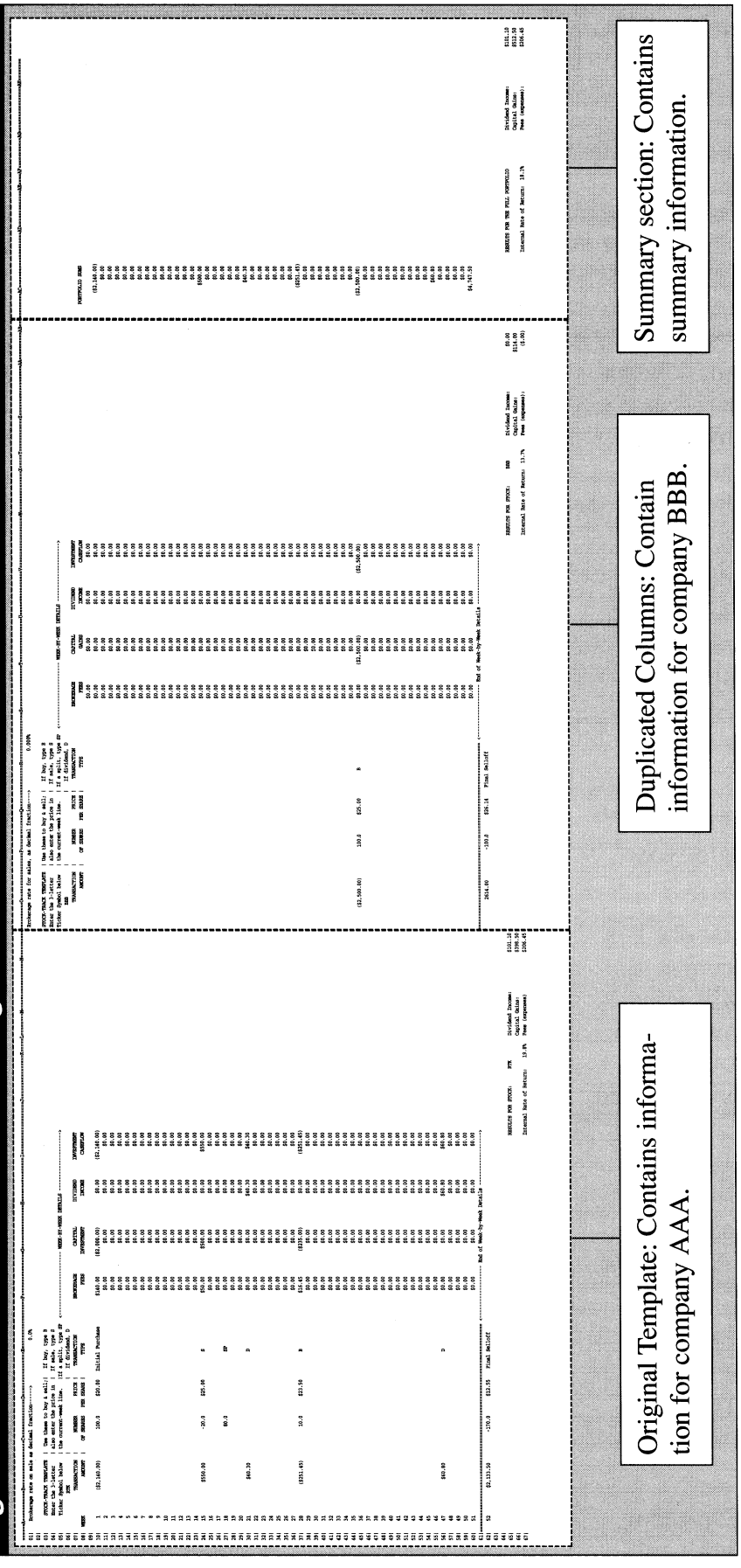
New Columns for a Second Stock

Now you will add columns to store the data for a second stock. Follow these steps:

1. Use the Apple-C Command to copy columns B through N to the clipboard.
2. Put the cursor in cell O1 of the PORTFOLIO template. Then press Apple-M to move the data from the clipboard. Select "Formulas and Values" in response to the "From clipboard?" prompt.

   AppleWorks will fill the cells to the right and below cell O1. Your screen should look like the example in *Figure 2*.
3. Use the Apple-L command to set the widths of columns O through AH to the values in *Figure 3. [Ed: Columns O through AB start two characters wide. Columns AC through AH start nine characters wide.]*

Figure 1: Stock Market Portfolio Register



Original Template: Contains information for company AAA.

Duplicated Columns: Contain information for company BBB.

Summary section: Contains summary information.

The columns you just copied contain the data for your first stock. Now you will replace the data with blank formatted cells that you copy down from row 11. Continue as follows:

4. Put the cursor in cell O11, press Apple-C, select "Within worksheet", and use the Right-Arrow Key to highlight cells O11 through R11. Then press the Return Key.

5. Put the cursor in cell O10, press the Period Key, scroll down to cell O60, and press the Return Key. Then respond "Yes" to the "You are about to clear or remove protected cells" warning.

6. Press Apple-J to jump to the bottom window. Then press the Apple-Right Arrow Key combination four times to display the second "RESULTS FOR STOCK" window at the bottom of your screen.

Now you will re-set the titles. Continue as follows:

7. Press Apple-J to jump to the upper window. Move the cursor until you put cell A3 in the upper left-hand corner of the screen. Then put the cursor in cell B9, press Apple-T, and set "Both" titles. Your screen should look like the example in *Figure 4*.

8. Save your work.

9. Put the cursor in cell O6 and type "BBB", the ticker symbol for the fictitious corporation in which you invested. Your titles will cause duplicate cells to appear at the top of the screen; enter "BBB" in the lower set of duplicated cells. (You cannot make a mistake here; AppleWorks will not let you enter data in the titles area.)

10. Enter the sample data in *Figure 5* into cells O44, P44, Q44, R44, and Q62.

11. Press Apple-K. The PORTFOLIO worksheet should display the values in the "RESULTS FOR STOCK" window at the bottom of *Figure 5*.

Creating the Portfolio Summary

Now you will create the portfolio summary at the bottom of the worksheet. Continue as follows:

1. Type the text entries listed in *Figure 6* into the appropriate cells of the PORTFOLIO worksheet. Use the Apple-J command to jump between the top and bottom windows on your screen.

2. Put the cursor in cell AC10 and type the formula `@SUM(I10,V10)`. The formula adds up the values in the "INVESTMENT CASHFLOW" columns of both stocks for the first week of your investment program. There was no transaction for the second stock at the beginning of the year, so the opening purchase of Company AAA stock appears as the result.

3. Use Apple-L in cell AC10 to set Protection to allow "Nothing".

4. With cell AC10 still highlighted, use Apple-C to copy its formula "within worksheet" to cells AC11 through AC61. Then press Apple-R in response to the "No change or Relative?" question to define all references as relative. The formulas add up the values in the INVESTMENT CASHFLOW columns for both stocks for weeks 2 through 52. Press Apple-K to update the results.

5. Press Apple-J to jump to the bottom window. In cell AE67 enter the formula `@IRR(AC10...AC61,.3/52)*52` to calculate the internal rate of return for your entire portfolio. Use Apple-L to set the cell's value format to Percent with one decimal place. "18.1%" should appear as the result.

Figure 2: After Importing Columns O through AH

```
File: PORTFOLIO              REVIEW/ADD/CHANGE              Escape: Main Menu
=========K=====L========M=================N===========O=P=Q=R=S=T=U=V=W=X=Y=Z=
   1|                                                   Bral f##
   2|
   3|                                                   ST   bIf
   4|                                                   En  heIf
   5|                                                   Ti  weIf<---EE--
   6|                                                   UN   |If
   7|                                                   TR  PRTRBRCADIIN
   8|                                                   AM |PETYFEGAINCA
   9|
  10|                                                         #### ##
  11|                                                         ########
  12|
  13|
  14|
================J================K=====L========M=================N===========
  65|RESULTS FOR STOCK:      AAA          Dividend Income:              $101.10
  66|                                     Capital Gains:                $398.50
  67|Internal Rate of Return:    19.8%    Fees (expenses):              $206.45
--------------------------------------------------------------------------------
O1: (Label, Protect-N) Brokerage rate for s

Type entry or use ⌘ commands                                      322K Avail.
```

Figure 3: Column Widths

Column	Width (characters)	Column	Width (characters)
O	20	AA	16
P	16	AB	9
Q	14	AC	19
R	20	AD	24
S, T, U, V	17	AE	7
W	24	AF	5
X	7	AG	22
Y	5	AH	16
Z	22		

6. In cell AH65, enter the formula `@SUM(N65,AA65)`. This formula totals your dividend income from both stocks. "$101.10" should appear when you press the Return Key.

7. Use Apple-C to copy the formula in cell AH65 into cells AH66 and AH67. Press Apple-R in response to the "No change or Relative?" question to specify that both references are relative. Press Apple-K to update the results. Your screen should look like the example in *Figure 7*.

9. Use Apple-L to protect the "RESULTS FOR THE FULL PORTFOLIO" block by allowing "Nothing". Then save your work.

Figure 4: After Setting Titles

```
File: PORTFOLIO                REVIEW/ADD/CHANGE              Escape: Main Menu
======A===========B================C=============D===============E==========
   3|    STOCK-TRACK TEMPLATE  | Use these to buy & sell; |   If buy, type B
   4|    Enter the 3-letter    | also enter the price in  |  If sale, type S
   5|    Ticker Symbol below   | the current-week line.   | If a split, type SP
   6|            AAA           |                          |   If dividend, D
   7|             TRANSACTION  |       NUMBER       PRICE |    TRANSACTION
   8|WEEK              AMOUNT  |    OF SHARES   PER SHARE |        TYPE
   9|
  10|   1         ($2,140.00)          100.0       $20.00   Initial Purchase
  11|   2
  12|   3
  13|   4
  14|   5
  15|   6
  16|   7
================W==============X=====Y===========Z=================AA=======
  65|RESULTS FOR STOCK:      AAA         Dividend Income:              $101.10
  66|                                    Capital Gains:                $398.50
  67|Internal Rate of Return:  19.8%     Fees (expenses):              $206.45
--------------------------------------------------------------------------------
B9: (Label, Protect-N)

Type entry or use ⌘ commands                                      322K Avail.
```

Figure 5: Company BBB Data

```
  File: PORTFOLIO              REVIEW/ADD/CHANGE              Escape: Main Menu
======A===========O================P=============Q===============R==========
   3|    STOCK-TRACK TEMPLATE  | Use these to buy & sell; |   If buy, type B
   4|    Enter the 3-letter    | also enter the price in  |  If sale, type S
   5|    Ticker Symbol below   | the current-week line.   | If a split, type SP
   6|            BBB           |                          |   If dividend, D
   7|             TRANSACTION  |       NUMBER       PRICE |    TRANSACTION
   8|WEEK              AMOUNT  |    OF SHARES   PER SHARE |        TYPE
  41|  32
  42|  33
  43|  34
  44|  35         ($2,500.00)          100.0       $25.00          B
  45|  36
  61|================================================================================
  62|  52          $2,614.00          -100.0       $26.14    Final Selloff
  63|
================W==============X=====Y===========Z=================AA=======
  65|RESULTS FOR STOCK:      BBB         Dividend Income:                $0.00
  66|                                    Capital Gains:                $114.00
  67|Internal Rate of Return:  13.7%     Fees (expenses):               ($.00)
--------------------------------------------------------------------------------
O6: (Label, Layout-C, Protect-L) BBB
Type entry or use ⌘ commands                                      328K Avail.
```

Figure 6: Text for Portfolio Summary and Results

Cell	Text
AC8	PORTFOLIO SUMS
AD65-AE65	RESULTS FOR THE FULL PORTFOLIO
AD67	Internal Rate of Return:
AG65	Dividend Income:
AG66	Capital Gains:
AG67	Fees (expenses):

Further Expansion

You can expand this spreadsheet to handle additional stocks. Follow these steps:

1. Copy columns B through N to the clipboard. *[Ed: Experienced users can limit the use of desktop memory by copying smaller blocks of text and formulas.]*
2. Put the cursor in cell AB1 or the next available cell in the PORTFOLIO spreadsheet. Press Apple-C and copy "From clipboard". Select "Formulas and values" in response to the "From clipboard?" prompt.
3. Beginning with the first new column (column AB for your third stock) widen and narrow the columns as required. Use the row widths for columns O through AA in *Figure 3* as a guide. Each column starts nine characters wide.
4. Copy a block of blank, formatted cells (cells O11 through R12) into the data entry area (in cells AB11 through AB60). Follow the directions in steps #4 and #5 under "New Columns for a Second Stock" above.

Now you will edit the summary formulas so they include the data from the new stock. Continue as follows:

5. Use the Apple-U command to edit the first formula in the "PORTFOLIO SUMS" column. (This is cell AP10 when you add the third stock to the template). Add the reference to the cell that contains the investment cashflow for the new stock. (This is cell AI10 when you add a third stock. The formula in cell AP10 should read `@SUM(I10,V10,AI10)`.) Respond "Yes" to ignore the protected cell warning.

6. Copy the revised formula into rows 11 through 61. Respond "Yes" to the protected cells warning. Make all cell references "Relative".
7. Press Apple-K to update all the calculations.
8. Use the Apple-U command to edit the formulas in the "RESULTS FOR THE FULL PORTFOLIO" window. Specifically, add references to the new stock in the formulas that calculate the total dividend income, capital gains, and fees. These are in cells AN65, AN66, and AN67 when you add a third stock to the template.
9. Press Apple-K one last time to update the calculations. Then save the expanded PORTFOLIO spreadsheet.

Figure 7: Portfolio Summary and Results

```
File: PORTFOLIO                REVIEW/ADD/CHANGE              Escape: Main Menu
======A===========Z================AA==========AB===========AC========
   3|
   4|
   5|
   6|
   7|
   8|WEEK                                                  PORTFOLIO SUMS
  55|  46                                                         $0.00
  56|  47                                                        $60.80
  57|  48                                                         $0.00
  58|  49                                                         $0.00
  59|  50                                                         $0.00
  60|  51                                                         $0.00
  61|====                                                     $4,747.50
  62|  52
 ===============AD=============AE====AF==========AG===============AH=======
  65|RESULTS FOR THE FULL PORTFOLIO      Dividend Income:            $101.10
  66|Internal Rate of Return:  18.1%     Capital Gains:              $512.50
  67|                                    Fees (expenses):            $206.45
 ------------------------------------------------------------------------------
AH65: (Value, Layout-D2, Protect-N) @SUM(N65,AA65)
Type entry or use ⌘ commands                                      326K Avail.
```

Using the Template

Last month's issue of the ***AppleWorks Forum*** described how to enter data into the stock transaction register. When you use this month's multi-stock tracking version, you must enter price updates for *every* stock you hold *each* time you use the template. Then press Apple-K to update the calculations.

Printing the Portfolio

Instructions for printing a single stock worksheet appeared in last month's ***AppleWorks Forum***. To print separate registers for each stock in this month's multi-stock worksheet, print the Company AAA section of the spreadsheet as a block. Then print the Company BBB section. Finally, print the portfolio summary and results section.

Conclusion

This month's template is an enhanced version of the stock transaction register that you created last month. Although that template handled only one company's stock, the expanded template can help you manage and evaluate a portfolio of stocks from different companies.

The relational spreadsheet capabilities built into AppleWorks 4.0 should provide new ways to track complex investment portfolios. (Look for AppleWorks 4.0 templates in upcoming issues of ***AppleWorks Forum***.) For now, though, AppleWorks 3.0 is a good choice for the investor.

[Stan Hecker is on the administrative staff at Michigan State University, East Lansing, Michigan, and is a partner in H&H Consulting, a Michigan concern specializing in school district financing and population analyses.]

[Ed: A working copy of the STOCK.TEMPL template and PORTFOLIO template appear on this month's issue of ***NAUG on Disk****, which costs $10 from* ***NAUG****. **NAUG on Disk** requires a 3.5-inch disk drive; the templates require AppleWorks 3.0.]*

How to help your fellow AppleWorks users:

Contact **NAUG** and ask for a "Members Helping Members Registration Form". Return the form and we'll add your name to our roster of helpful volunteers.

NAUG, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965.

A Quicker Way to Adjust Column Widths

by Keith Johnson

You know that macros make it easy to perform repetitive AppleWorks operations. And what could be more repetitive than the keystrokes you enter to re-size the columns in a spreadsheet?

The three macros in this month's article give you two ways to re-size your spreadsheet columns. The <sa-W> and <sa-N> macros widen and narrow columns by any number of characters that you specify. The macros make it easy to re-size columns as you develop your own templates.

The <ba-E> macro sets the column width to the number of characters that you specify. That makes it easy to generate narrow columns for vertical lines and to create the spreadsheet templates described in the popular My Favorite Template series in the ***AppleWorks Forum***.

How to Use the Macros

Follow these steps to use the macros:

1. Type the macros into your macro file.
2. Compile the file and save it as your default macro set. *[Ed: Step-by-step directions for adding a macro to your default macro set appear in the sidebar "How to Add a Macro" in the April 1993 issue of the* ***AppleWorks Forum****.]*
3. Put the cursor in the column you want to re-size. If you know the final width of the column, press <ba-W>, type the desired width, and press the Return Key.

   If you do not know the final width, put your cursor in the desired column and press <sa-W> to widen the column or <sa-N> to narrow the column. Then specify the number of characters you want to add or delete to the width of the column. You can re-size any set of adjacent columns by putting the cursor in the left-most or right-most column you want to re-size, press <sa-W> or <sa-N>, and highlight the columns you want to change.

Ultra 4 Changes

The macros in *Figure 1* run under UltraMacros 3.1 or later. Follow these steps to run the macros under Ultra 4:

1. Delete the <ba-left> and <ba-right> subroutines.
2. Make the following changes to the <ba-W> macro:

   A. Replace the line starting "ba-right" with "(oa-right) n:endif:".

   B. Replace the line starting "ba-left" with "(oa-left) n:endif:". (The delimiters in the new expressions are parentheses, not brackets. Ultra 4 supports this syntax for repeating commands.)

3. Make the following changes to the <sa-N> and <sa-W> macros:

   A. Replace "ba-left" with "(oa-left) n".

   B. Replace "ba-right" with "(oa-right) n".

Summary

There is nothing difficult about narrowing and widening spreadsheet columns in AppleWorks. But these macros help to make this repetitive task quick and easy work.

[Keith Johnson is Associate Director of the Fleischmann Planetarium at the University of Nevada. A working copy of these macros appears on this month's ***NAUG on Disk****, which costs $10 from* ***NAUG****.* ***NAUG on Disk*** *requires a 3.5-inch disk drive. These macros require AppleWorks 3.0 enhanced with UltraMacros 3.1 or later.]*

Figure 1: Macros that Adjust Spreadsheet Column Widths

```
Narrow or widen columns by a specified amount:
N:<asp><                              { Define the macro that narrows the columns.                          }
 oa-L>C<input:                        { Go to the Layout Menu and let the user choose the desired columns.}
 rtn>C<                               { Indicate that you want to change column widths.                     }
 msg ' Enter number of times to narrow column ': { Display this message.                                    }
 $1 = getstr 2:                       { Let the user enter the number of characters.                        }
 n = val $1:                          { Store the entry as a numeric variable.                              }
 msg "":                              { Clear the message.                                                  }
 if n = Ø rtn : endmacro : endif:     { If the user entered a zero, end the macro.                          }
 ba-left:                             { Call the subroutine that narrows the columns.                       }
 rtn>!                                { Leave the Layout Menu and end the macro.                            }

W:<asp><                              { Define the macro that widens the columns.                           }
 oa-L>C<input:                        { Go to the Layout Menu and let the user choose the desired columns.}
 rtn>C<                               { Indicate that you want to change column widths.                     }
 msg " Enter number of times to widen column. ": { Display this message.                                    }
 $1 = getstr 2:                       { Let the user enter the number of characters.                        }
 n = val $1:                          { Store the entry as a numeric variable.                              }
 msg "":                              { Clear the message.                                                  }
 if n = Ø rtn : endmacro : endif:     { If the user entered a zero, end the macro.                          }
 ba-right:                            { Call the subroutine that widens the columns.                        }
 rtn>!                                { Leave the Layout Menu and end the macro.                            }

Macro that adjusts column width to a specified value:
<ba-W>:<asp><                         { Define the macro.                                                   }
 w = peek #ccwidth:                   { Get the current column width.                                       }
 $2 = " Current width: " + str$ w + ". Enter desired width. ": { Define the message.                        }
 oa-L>C<rtn>C<                        { Change the width of the current column.                             }
 msg $2:                              { Display the message.                                                }
 $1 = getstr 2:                       { Let the user enter the width for the column.                        }
 x = val $1:                          { Store the entry as a numeric variable.                              }
 msg "":                              { Clear the message.                                                  }
 if x = Ø rtn : endmacro : endif:     { If the user does not enter a number, end the macro.                 }
 if x > w then n = x - w:             { Widening the column? Calculate the change...                        }
  ba-right:endif:                     { ...and call the subroutine that widens the column.                  }
 if x < w then n = w - x:             { Narrowing the column? Calculate the change...                       }
  ba-left:endif:                      { ...and call subroutine that narrows the column.                     }
 rtn>!                                { Leave the Layout Menu.                                              }

Subroutines that adjust column sizes (only necessary for UltraMacros 3.x):
<ba-left>:<asr><                      { Define the subroutine that narrows columns.                         }
 begin:                               { Begin the loop.                                                     }
  oa-left:                            { Narrow the column by one character.                                 }
  n = n - 1:                          { Decrement the counter.                                              }
  if n > Ø rpt>!                      { If not done, repeat the loop.                                       }

<ba-right>:<asr><                     { Define the subroutine that widens columns.                          }
 begin:                               { Begin the loop.                                                     }
  oa-right:                           { Widen the column by one character.                                  }
  n = n - 1:                          { Decrement the counter.                                              }
  if n > Ø rpt>!                      { If not done, repeat the loop.                                       }
```

Discount Offers for NAUG Members

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Do you know how many tips, ideas, and hints appear in each issue of the ***AppleWorks Forum***? Now a special discount makes this the time to fill in the gaps in your library of back issues.

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A complete list of the 72 available back issues appears in the May 1993 issue of the ***AppleWorks Forum***.

*[Back Issues Special, **NAUG**, Box 87453, Canton, MI 48187; (313) 454-1115; Fax: (313) 454-1965.]*

AppleWorks 4.0

Quality Computers now offers **NAUG** members a $5 discount on AppleWorks 4.0, the most significant upgrade ever made to AppleWorks.

Until January 1, 1994 **NAUG** members can upgrade to AppleWorks 4.0 for $74.95 directly from Quality. Indicate that you are a **NAUG** member and provide your **NAUG** membership number when you order.

[Quality Computers, 20200 Nine Mile Road, St. Clair Shores, Michigan 48080; (800) 777-3642; Fax: (313) 774-2698.]

Discounts on *The AppleWorks Educator*

NAUG members can get special discounts on back issues of the AppleWorks Educator, a popular newsletter that focused on the educational applications of AppleWorks.

The AppleWorks Educator's *AppleWorks and AppleWorks GS Great Pack* contains over 320 pages of ideas, how-to articles, and tips to help you use AppleWorks and AppleWorks GS in education. The package also includes six double-sided resource disks with ready-to-use templates, and numerous freeware and shareware programs for AppleWorks and AppleWorks GS users.

The Great Pack normally costs $59.95, but **NAUG** members can buy the package directly from the publisher for $32 plus $2.50 s/h. Add $3 for purchase orders and $5 for orders shipped outside North America. Include payment with your order; the company does not accept credit cards.

[The AppleWorks Educator, Box 72, Leetsdale, Pennsylvania 15056; (412) 741-4110.]

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The Focus Hard Card is a combination hard drive/controller card that mounts in a peripheral slot inside any Apple IIe or Apple IIGS computer. That makes the drive ideal for schools that can protect the drive with their standard security systems, and for individual users who want to move their drive between computers.

Parsons Engineering recently reduced their prices for Focus Hard Cards, added additional sizes to the product line, and extended the **NAUG** discount on these products. As a **NAUG** member, you get a 20% discount from the following prices (which include a built-in interface card): $229 (20 megabytes); $329 (40 megabytes); $379 (60 megabytes); $429 (80 megabytes); $569 (120 megabytes); $664 (160 megabytes); $741 (213 megabytes). Add $15 s/h. Include a check or money order with your order; Parsons Engineering does not accept credit cards. Add $10 for C.O.D. deliveries.

Identify yourself as a **NAUG** member and provide your **NAUG** membership number with your order. Schools should inquire about an additional 5% discount.

[Parsons Engineering, 5010 Rimhurst Avenue, Covina, California 91724; (818) 966-5538; Fax: (818) 966-5701.]

A Paragraph Sorting Macro

by Barclay Clemesha

This article describes a sophisticated Ultra 4 macro that adds paragraph sorting capability to AppleWorks. Ultra 4 programmers (and aspiring programmers) will appreciate the logic in the author's macro.

One of the useful features of advanced word processing programs is their ability to sort paragraphs into alphabetical or numerical order. That lets you sort lists of names and addresses and re-sequence paragraphs in a document.

This article describes a macro that adds this feature to AppleWorks. The macro requires Ultra 4.1 or later and AppleWorks 3.0.

Figure 1: .GetPtr / .PutPtr Demonstration

```
START
A:<awp:                 // Macro that swaps two lines.
x = peekword $bØ:       // Get the pointer address for the first line.
down:                   // Move down one line.
y = peekword $bØ:       // Get the pointer address for the second line.
up:                     // Move up one line.
a = .GetPtr x:          // Get the pointer for the first line.
b = .GetPtr y:          // Get the pointer for the second line.
.PutPtr x, b:           // Interchange the pointers.
.PutPtr y, a:           //
oa-z:oa-z>!             // Update the screen.
```

Assumptions and Limitations

A macro designer makes assumptions and accepts limitations when setting the parameters for a macro. Consider the following:

1. The macro assumes that you inserted a blank line between paragraphs; the blank line must contain a carriage return and no other character.
2. The macro can re-sequence up to 60 paragraphs containing a total of 255 lines (including blank lines).
3. The macro assumes there are no formatting commands within the section you are sorting. You can include tabs and printer commands (such as boldface and super/subscript) that appear within the flow of text, but you cannot change margins, indents, or include any other commands that require a format line such as
   `--------Left Margin: 1.5 inches`
   in the selected segment of your document.

   You can sort indented paragraphs but cannot issue an indent command within the section being sorted.
4. The macro uses the .Sort command which sorts characters in ASCII order. That produces an alphabetical sort. The macro will sort numbered paragraphs if every paragraph number has the same number of digits. If you have more than nine paragraphs, insert a leading zero in front of paragraphs one through nine. You can always delete the leading zeros after sorting, and you can even write a macro to do this automatically.

How AppleWorks Stores Lines

The macro uses the .GetPtr (Get Pointer) and .PutPtr (Put Pointer) commands, two of the more esoteric dot commands that come with Ultra 4. To understand these commands you need to know how AppleWorks stores your documents in memory.

AppleWorks does not store your text as one long series of bytes; that would make memory management difficult when you insert or delete text in the document. Instead, AppleWorks stores the bytes from each line of your document in consecutive addresses in memory. The program maintains a "pointer" to the beginning address of each line of text. AppleWorks stores the pointers (but not the

Figure 2: Paragraph Sorting Macro

```
labels
.ParaSort
#FirstString = 40                       // Lowest string variable the macro will use.
#StringMax  = 99                        // Highest string variable the macro will use.
START
s:<asr:                                 // Define the subroutine that finds paragraphs.
begin:                                  // Loop to go to the start of the next paragraph.
 if n > m:exit:endif:                   // Exit the loop if you are past the end of the selection.
 x = peek $B5:                          // Check for a carriage return-only line.
if x = $D0:down:n = n + 1:rpt:endif:    // If it finds a return, repeat the loop.
if s = #StringMax:ba-s:endif:           // Out of string memory, so stop here.
s = s + 1:                              // There is no carriage return, so this is the first line of...
$(s) = cell + "                ":       // ...a new paragraph. Increment s and store text in $(s).
Add = peekword $B0:                     // Get the pointer address for this line and store in "Add".
$1 = "      " + str$ Add:               // Add leading spaces to the pointer address and store in $1.
$1 = right $1,6:                        // Truncate the string to a fixed length.
$(s) = Left $(s),15:                    // Truncate the line to a fixed length.
$(s) = $(s) + $1:                       // Combine the line with the pointer address.
tLastString = s - 1:                    // Remember the last string number when exiting.
ifnot t < #FirstString:                 // Except for the first time around...
$(t) = $(t) + $1:endif:                 // Add the pointer address for the start of the next paragraph to
                                        // the previous string.
if n > m:endmacro:endif:                // Exit the subroutine if past the end of the selected area.
begin:                                  // Loop to go to the end of the paragraph.
 x = peek $B5:                          // Check for a carriage return-only line.
 ifnot x = $D0:down:                    // If not a return-only line, repeat the loop.
  n = n + 1:rpt:endif:                  // Otherwise, you found the end of this paragraph, so...
goto sa-s:                              // ...go back to the start of this subroutine.
>!

S:<awp:                                 // Main sort paragraph macro.
.menubar2 '','A-Z,Z-A', #',':           // Display the menu for sorting choices.
cSort = z-2:                            // cSort = 0 for Z to A sort, -1 for A to Z sort.
msg 'Move cursor to last paragraph to sort and press CR': // Display this message.
Primus = Peekword $B0:                  // Store the address of the first line selected.
input:                                  // Move the cursor to the last paragraph you will sort.
msg "":                                 // Clear the message.
begin:                                  // Loop to get to the end of the last paragraph.
 x = peek $B5:                          // Check for a carriage return-only line
 down:ifnot x = $D0:rpt:endif:          // If not a return-only line, repeat the loop.
Ultimus = peekword $b0:                 // Store the address of the pointer to the end of the last
                                        // paragraph you will sort.
mLines = U - P / 2:                     // Determine the total number of lines to sort.
if mlines > 255:ba-s:endif:             // End if you ask to sort more than 255 lines.
display #off:                           // Freeze the display.
(up) mlines:                            // Go back to the first line.
String = #FirstString - 1:n = 1:        // Initialize the string and line counters.
sa-s:                                   // Launch the subroutine that finds the paragraph breaks.
ifnot t > #FirstString:                 // If there is only one paragraph...
 ba-s:endif:                            // ...you cannot sort so you quit.
Ultimus = Add - 1:                      // Update the last line address.
mLines = U - P / 2:                     // Update the number of lines.
.Sort #FirstString, tLastString, cSort:// Sort the strings with their respective pointer addresses.
qMemStart = $800:                       // Starting address for saving the pointers.
```

Figure 2: Paragraph Sorting Macro (continued)

```
                                    // Begin double loop to temporarily store the pointers in memory
                                    // from $800 up.
for s = #FirstString to tLastString:  // Outer loop indexed on string/paragraph number s.
 $1 = mid $(s),17,6:                // Get the paragraph start pointer address.
  jstart = val $1:                  // Store it in a numeric variable.
 $1 = mid $(s),23,6:                // Get the next paragraph start pointer address.
  kend = val $1:k = k - 2:          // Subtract 2 for the paragraph end.
   for i = j to k step 2:           // Inner loop, indexed on pointer address i.
    x = .GetPtr i:                  // Get the pointer stored at address i.
    pokeword q, x:                  // Save the pointers at address q ($800 up).
    q = q + 2:                      // Increment the pointer save address q.
   next i:                          // Increment the pointer address i (increment line).
next s:                             // Increment the string number s (increment paragraph).
Address = $800:                     // Initialize the saved pointers address A.
for n = Primus to Ultimus step 2:   // Loop to store the sorted pointers.
 Ptr = Peekword Address:            // Get the pointer saved at A.
 .Putptr n, Ptr:                    // Store the pointer at address n.
 Address = A + 2:                   // Increment the address for the next saved pointer.
next n:                             // Increment the address to store the pointer.
ba-s:                               // Update the screen.
>!

<ba-s>:<awp:                        // Subroutine that restores the screen.
oa-z:                               // Display the format commands.
(up) m+1:first:                     // Put the cursor in the first line.
display 1:                          // Restore the display.
oa-z:                               // Hide the format commands...
stop>!                              // ...and stop.
```

lines themselves) in a continuous sequence. As a result, AppleWorks only changes (a) the two-byte pointers to the text in the lines that changed and (b) the text in any lines changed by the insertion or deletion. In that way, your edits do not affect the rest of the document stored in memory. *[Ed: See Randy Brandt's article "Memory Management" which appeared in the August 1990 issue of the* ***AppleWorks Forum*** *for more information about how AppleWorks stores word processor documents.]*

AppleWorks stores the pointers to the lines of a word processor document in the Apple II's auxiliary memory, starting at location $4000. Since each pointer occupies two bytes, AppleWorks stores the pointer for the first line at location $4000, the pointer for the second line at $4002, and so on. Every line, including formatting lines such as `--------Left Margin:  1.Ø inches` has a pointer.

AppleWorks stores the address of the pointer to the current line at location $BØ.

The .GetPtr and .PutPtr Commands

The macro in *Figure 1* demonstrates how to use the .GetPtr and .PutPtr commands to find and change the pointers to a line of text. Compile the macro, put the cursor on any line of text except the last line of a document, and press <sa-a>. The macro will exchange the entire line with the following line of text.

This macro gets the pointers for two consecutive lines and stores them back in memory in reverse order. That interchanges the two lines. This ability to rearrange lines in memory is the essence of the paragraph sorting macro.

Sorting Paragraphs

Figure 2 contains a macro that sorts the paragraphs you specify. To use the macro, put the cursor on the first line of the first paragraph you want to sort, press <sa-s> and select "A-Z" or "Z-A". Then move the cursor to anywhere on the last paragraph you will sort and press the Return Key.

The Logic

The macro starts by asking you (a) whether to sort alphabetically or reverse alphabetically, and (b) to define the range of paragraphs to be sorted. It then goes to the <sa-s> subroutine macro and continues by following this logic:

1. The subroutine macro stores the first 15 characters of the first line of the first paragraph in string variable $(s) together with the address of the pointer to this line. The .Sort command will use these characters to sort the paragraphs.

2. The macro then starts looking for the first paragraph separator. (The macro finds paragraph separators by peeking the byte at $B5, which contains $DØ if the line contains only a carriage return.) You can have more than one blank line between paragraphs, so the macro searches for the first non-blank line after the blank line. This is the first line of the next paragraph.

   Next, the macro tags the address of the pointer to this line onto the end of the string variable referred to in step #1. It then loops back to step #1 and repeats the process for paragraph #2. It repeats this process until it gets to the last line to be sorted. In this way the macro creates a sequence of string variables containing the first 15 characters of the first line of each paragraph, the pointer addresses for the first line of the current paragraph, and the first line of the next paragraph.

3. Back in the main macro, the .Sort command rearranges the strings in the required sequence. The "mid" command recovers the pointer addresses from the strings in their new sequence. To find the pointer address for the end of a paragraph, the macro subtracts two from the address of the pointer to the beginning of the next paragraph.

4. Next, the macro uses the .GetPtr command to get the pointers for each line of the sorted paragraphs in turn and stores the pointers in memory starting at location $800. (AppleWorks uses this area of memory for temporary storage during disk access. The available memory in this area limits you to sorting a maximum of 255 lines.) Finally, the macro uses the .PutPtr command to store the sorted pointers back into auxiliary memory. (Note that the intermediate storage at $8ØØ up is necessary to stop the pointers from being overwritten by .PutPtr before being read by .GetPtr.)

The comments within the macro describe its operation. The labels #FirstString and #StringMax restrict the string variables used by the macro so it does not overwrite variables you might want to keep for other macros. Since you need one string variable for each paragraph, the maximum number of paragraphs you can sort is #StringMax - #FirstString.

Conclusion

This macro demonstrates how you can use TAPL, The AppleWorks Programming Language, to add features to AppleWorks. Many UltraMacros users have customized AppleWorks to the point where it challenges the most sophisticated programs running on much more powerful computers.

[Dr. Barclay Clemesha is an atmospheric physicist with the Brazilian Space Research Institute. He writes Apple II software in his spare time.]

Dealer Update

Apple II Products Dealers

Please add the following company to the list of Apple II mail order dealers on pages 29-31 of the August / September 1993 issue of the ***AppleWorks Forum***:

RAMCO Sales
Discount Hardware and Software
3002 81st Circle North
Minneapolis, Minnesota 55444
(612) 561-8144

Roger Kent, RAMCO's owner, is a local radio and television personality who specializes in helping Apple II users locate hard to find equipment and software for their systems.

Our thanks to **NAUG** member Jim Hadden for telling us about this company.

New Utilities in the NAUG Library

Pointless Updater

WestCode's new Pointless Updater Disk fixes problems with the System 6.0.1 Font Manager and updates Pointless 2.0 or 2.0.1 to version 2.0.2.

According to WestCode, Pointless 2.0.2 fixes problems in TypeSet, offers improved font rendering routines that enhance font compatibility, and improves the rending of component characters such as umlauts and other accented characters.

WestCode includes complete documentation in a Read Me file on the disk.

If you use Pointless 2.0 or 2.0.1, you should use this disk to update to 2.0.2.

File Attribute Zapper 2.1

File Attribute Zapper lets you examine and change the primary type, auxiliary type, and access bits of any ProDOS file. That lets you convert binary files that you accidentally download as text files and recover from other file incompatibility problems. You can also use the program to learn how ProDOS stores different types of files.

File Attribute Zapper requires an enhanced Apple IIe, an Apple IIc or IIc+, or an Apple IIGS.

ProDesk Plus 3.02

NAUG is now shipping version 3.02 of ProDesk Plus, the latest version of this popular 8-bit program selector and utilities for Apple IIc, IIc+, IIGS, and enhanced Apple IIe computers.

ProDesk Plus lets you view text, AppleWorks word processor, high resolution, and double high resolution files without the application used to create those documents and graphics. Utilities included with ProDesk let you create subdirectories, delete, rename, lock/unlock, copy, and find files. ProDesk displays the time on any Apple II equipped with a ProDOS-compatible clock and includes a built-in screen saver to protect against screen burn-in. The program also includes an alarm clock and a pop-up help screen.

Version 3.02 of ProDesk Plus displays up to 51 files in your directories, lets you navigate between disks and launch programs with a mouse, offers enhanced navigational controls, and lets you select your destination disk from a menu.

ProDesk Plus is shareware; you send the author $20 after you get the disk from **NAUG**. (The shareware fee is a one-time payment. Registered ProDesk users do not pay an additional shareware fee for this upgrade.)

Our thanks to Dr. Helge Malmgren of Molndal, Sweden, the author of ProDesk Plus, for submitting this disk to the **NAUG** library.

Heatseeker

Heatseeker is an easy-to-use, ultra-fast, menu-driven disk and file utility. The program copies disks and files and performs other file and disk maintenance functions. Heatseeker includes an undelete utility that can restore deleted and damaged files and a file viewer that displays the contents of text and binary files.

The program is ideal for schools and individuals who need a fast freeware program that quickly copies disks and for students and others who need to recover deleted or damaged files.

How to Get Disks

Unless otherwise noted, all disks are available in both 5.25-inch ($4) and 3.5-inch ($6) format, plus $2 s/h *per order*. Order from: Public Domain Library, **NAUG**, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965. **NAUG** accepts Visa and MasterCard.

All **NAUG** disks (except system disks provided by Apple Computer) are also available for downloading from **NAUG**'s electronic bulletin board (the Electronic Forum), and from the **NAUG** areas on CompuServe, America Online, and GEnie.

NAUG's Disk Rescuers

by Cathleen Merritt

The March 1990 issue of the ***AppleWorks Forum*** describes ways to recover data from unreadable files or disks (see "How to Get Help Recovering AppleWorks Data"). When those efforts fail, is it time to turn to one of **NAUG**'s "Disk Rescuers"; members who are expert on the intricacies of disk structure and operation. These gurus can usually recover data from all but the most badly damaged disks.

If you are a knowledgeable user and are willing to help others recover information from damaged disks, contact the **NAUG** office and indicate that you are willing to be a Disk Rescuer.

Here is an updated list of the Disk Rescuers.

Key

The symbols below each name indicate the kind of disks the expert can recover:

- ✖ = Damaged ProDOS directories
- ■ = Damaged AppleWorks files
- ◇ = Damaged 5.25-inch disks
- ○ = Damaged 3.5-inch disks
- ▽ = Damaged hard drives

James Hirsch
✖ ■ ◇ ○
12310 Jonquil Street NW
Coon Rapids, MN 55433
(612) 412-8393 (home)
(612) 422-5572 (work)
Fee: Free
Turn Around Time: 2-5 days
Comment: Send printed copy of disk directory if possible.

Kevin Jarvin
■ ◇ ○ ▽
R.R. 2, Box 3
Dixon, NE 68732
(402) 584-2271
Fee: Cost of postage and disk
Turn Around Time: 1 week

Peter Pfeiffer
✖ ■ ◇ ○
503 Dranesville Rd
Herndon, VA 22070
(703) 437-1985 (home)
Fee: $10/disk
Turn Around Time: 2-3 days
Comment: Call for quotes on other jobs.

Leon Raesly
✖ ■ ◇ ○
6201 Greenbelt Rd M-16
College Park, MD 20740
(301) 220-0717 (9-5 weekdays)
Fee: $5/disk
Turn Around Time: 1 week
Comment: Call first (can often provide help over the phone).

Jeff Strichard
✖ ■ ◇ ○ ▽
7521 N.W. 10th Ct.
Ft. Lauderdale, FL 33313
(305) 587-9590 (home)
Fee: $5/file; $5/disk
Turn Around Time: 3-5 days
Comment: Fee includes postage.

Bob Suits
✖ ■ ◇ ○
1107 Parkridge Dr.
Columbia, MO 65203
(314) 445-6082 after 4 pm
Fee: $20/hour; call for a quote.
Turn Around Time: Varies

John G. Thomas
✖ ■ ◇ ○
38 Sunnybrae Blvd.
Trenton, NJ 08620
(609) 585-2748 (home)
(609) 989-2495 (office)
Fee: $35/hour
Turn Around Time: Few days

Help with Telecommunications

How to Use this List

Use this month's list to find volunteers who will answer your questions about telecommunications. To the left of each volunteer's name are numbers indicating the topics that consultant supports.

1 = NAUG's BBS	7 = EtherNet
2 = America Online	8 = Modems
3 = CompuServe	9 = Networks - Others
4 = GEnie	10 = ProTerm
5 = AppleShare	11 = Shrink-It
6 = AppleTalk	12 = Talk Is Cheap

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10	Clay Evitts	Tucson	602-885-9789	602-296-5491
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1,8	Geoff Hollingsworth	Morrison	303-697-9277	303-760-4345
1-4,8-12	Stephen Reiss	Aspen	303-923-6172	303-923-6172
Florida				
6,8,9,11	Henry Clay Bailey III	Jacksonville	904-744-2499	904-725-3477
1,10	Ann Bennett	Orlando	407-843-0545	407-647-6366
1,2,4,8,10-12	Jeff Strichard	Ft. Lauderdale	305-587-9590	305-977-4991
Georgia				
1,2,4-6,10,11	Douglas Gum	LaGrange	706-884-2559	706-845-7283
4,8,10,11	Rick White	Stone Mountain	404-469-0521	404-616-3350
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2,8	Howard Katz	Batavia	708-879-5818	708-246-4900
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3,6	Donald Corson	Memphis	812-256-3517	502-473-3036
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4	Joel Goldman	Nashville	615-352-3617	615-352-8676
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